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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,871	02/20/2004	Bonnie Hepburn	29635-714.201	7593

21971 7590 12/28/2007
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EXAMINER	
POLANSKY, GREGG	
ART UNIT	PAPER NUMBER
1614	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,871	HEPBURN ET AL.	
	Examiner	Art Unit	
	Gregg Polansky	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35 and 52-69* is/are pending in the application.

4a) Of the above claim(s) *18 and 19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17,20-35 and 52-69* is/are rejected.

7)☒ Claim(s) *52 and 53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :6/09/2004,6/28/2005,8/19/2005,10/10/2006, 4/26/2007.

DETAILED ACTION

Status of Claims

1. Applicants' preliminary amendments, filed 7/27/2005, canceling Claims 36-51, amending Claims 1-35, and adding new Claims 54-69, are acknowledged.

2. Applicants' Information Disclosure Statements, filed 6/09/2004, 6/28/2005, 8/19/2005, 10/10/2006, and 4/26/2007, are acknowledged and have been reviewed to the extent that each reference is a proper citation on a US Patent. Co-pending Applications 10/893092, 10/893203, 10/938766, and 11/138763 are noted, as requested on 7/27/2005.

Applicants' election of species with traverse in the reply filed on 6/21/2007 is acknowledged. Applicants' provisionally elected with traverse, the acid labile proton pump inhibitor, omeprazole, and the buffering agent, sodium bicarbonate. The traversal is on the ground that in Applicants' view, there is no undue burden.

Applicants' reason for traversal has been given careful consideration but is not found persuasive. There would be a serious burden if all species of both acid labile proton pump inhibitors and all buffering agents were examined together. Among the various species contemplated for proton pump inhibitors and buffering agents, distinct chemical and physical properties are noted. The numerous combinations result in varying onsets/durations of action, effects on gastric pH, and variances in other pharmacodynamic/pharmacokinetic parameters.

Accordingly, the request for an election of species is still deemed proper and is therefore made FINAL.

3. Claims 18 and 19 are presently withdrawn from further consideration by the Examiner, pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species. Re-affirmation of the elections is requested when Applicants respond to this Office Action.

4. Claims 1-35 and 52-69 are pending.

5. Claims 1-17, 20-35, and 52-69 are presently under consideration.

Claim Objections

6. Claims 52 and 53 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form. Claims 52 and 53 do not further limit the subject matter of Claim 1. Claims 52 and 53 are each claims to methods of treatment using a composition of Claim 1. Claim 1 is not a composition claim.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-17, 20- 35, and 52-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "at least some of the proton inhibitor" in Claim 1, 5, 29-31 and 34 renders the claims indefinite because it does not adequately define the metes and bounds of the claims.

Claim 32 recites an excipient selected from the group consisting of *inter alia* "parietal cell activators". An excipient is a neutral agent used in the manufacture of a dosage form. A parietal cell activator is an active agent in the composition.

9. Claims 59-61, 63, 64 and 69 recite T_{max} or C_{max} limitations without specifying that they are the T_{max} or C_{max} of the proton pump inhibitor of Claim 1.

10. Claims 57-59, 62-67 recite the limitations specifying minimum proton pump inhibitor plasma concentrations upon oral administration of the composition of Claim 1. There is insufficient antecedent basis for these limitations in Claim 1. Claim 1 does not recite a specific dose or a therapeutically effective dose. A minimum plasma concentration is determined by *inter alia* the dose administered.

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. <u>This is a Written Description rejection.</u>

The Claim16 recites "derivative or prodrug thereof" with respect to the proton pump inhibitors listed, and Claim 17 recites "prodrug thereof" with respect to the proton pump inhibitor, omeprazole. There is insufficient written basis for these claim limitations in the Specification.

Regarding the requirement for adequate written description of chemical entities, Applicant's attention is directed to MPEP §2163. In particular, *Regents of the University of California v. Eli Lilly & Co.,* 119 F.3d 1559, 1568 (Fed. Cir. 1997), *cert denied*, 523 U.S. 1089, 118 S. Ct. 1548 (1998), holds that an adequate written description requires a precise definition, such as by structure, formula, chemical name, or physical properties, "not a mere wish or plan for obtaining the claimed chemical invention." *Elli Liily*, 119 F.3d at 1566. The Federal Circuit has adopted the standard set forth in the Patent and Trademark Office ("PTO") Guidelines for Examination of Patent Applications under the 35 U.S.C. 112.1 "Written Description" Requirement ("Guidelines"), 66 Fed. Reg. 1099 (Jan. 5, 2001), which state that the written description requirement can be met by "showing that an invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics," including, *inter alia*, "functional characteristics when coupled with a known or disclosed correlation between function and structure..." *Enzo Biochem, Inc. v. Gen-Probe Inc.,* 296 F.3d 316, 1324-25 (Fed. Cir. 2002) (quoting *Guidelines*, 66 Fed. Reg. At 1106 (emphasis added)). Moreover, although *Elli Lilly* and *Enzo* were decided within the factual context of DNA sequences, this does not preclude extending the reasoning of those cases to chemical structures in general. *Univ. of Rochester v. G.D. Searle & Co.*, 249 Supp. 2d 216, 225 (W.D.N.Y. 2003).

Applicants have failed to provide any structural characteristics, chemical formula, name(s) or physical properties of derivatives and prodrugs of the proton pump inhibitors recited in the claims, aside from a broad recitation that such are contemplated for use in the invention. As such, it is not apparent that Applicants were actually in possession of, and intended to use within the context of the present invention, any specific derivatives or prodrugs of the recited proton pump inhibitors at the time the present invention was made. The skilled artisan could not "immediately envisage" the claimed compounds based on the description in the discloser.

13. Claims 1-17, 20-35, and 52-69 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the Specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention. The claims are directed to the prevention or treatment of GERD symptoms comprising administering an acid labile proton pump inhibitor (a) and a buffering agent (b). The Specification does not reasonably provide enablement for the methods of prevention within the full scope of the claimed compounds. Further, the Specification fails to provide support for attaining the gastric pH values pre and post meal as recited in Claims 1-3, 6-10, and 34 or proton pump inhibitor blood serum concentrations and time to maximum concentration recited in Claims 20, 21, and 57-69. To be enabling, the Specification must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557, 1561 (Fed. Cir. 1993). Explaining what is meant by "undue experimentation," the Federal Circuit has stated that:

> The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which experimentation should proceed to enable the determination of how to practice a desired embodiment of the claimed invention. *PPG v. Guardian*, 75 F.3d 1558, 1564 (Fed. Cir. 1996).

The factors that may be considered in determining whether a disclosure would require undue experimentation are set forth by *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 wherein, citing *Ex parte Forman*, 230 USPQ 546 (Bd. Apls. 1986) at 547, the court recited eight factors to consider when assessing whether or not a disclosure would require undue experimentation. These factors are: 1) the quantity of experimentation necessary 2) the amount of direction or guidance provided 3) the presence or absence of working examples 4) the nature of the invention 5) the state of the art 6) the relative skill of those in the art 7) the predictability of the art and 8) the breadth of the claims.

These factors are always applied against the background understanding that scope of enablement varies inversely with the degree of unpredictability involved. *In re Fisher*, 57 CCPA 1099, 1108, 427 F.2d 833, 839, 166 USPQ 18, 24 (1970). Keeping that in mind, the Wands factors are relevant to the instant fact situation for the following reasons:

The nature of the invention, state of the prior art, relative skill of those in the art and the predictability of the art

The invention is drawn to treating or preventing gastroesophageal reflux disease (GERD) symptoms. The relative skill of those in the art is high, generally that of an M.D. or Ph.D. with expertise in the area of gastroenterology.

However, that factor is outweighed by the unpredictable nature of GERD. In cases involving unpredictable factors, such as the instant claims drawn to physiological activity, the scope of enablement varies inversely with the degree of unpredictability of the factors involved. One skilled in the chemical or biological arts cannot always reasonably predict how different chemical compounds might behave under varying circumstances. See *Ex parte Sudilovsky* 21 USPQ2d 1701.

The amount of direction or .guidance provided and the presence or absence of working examples

The instant Specification is drawn to a showing of the pharmacokinetics and pharmacodynamics of omeprazole/sodium bicarbonate compositions (pages 69-89). These showings are clearly not predictive for prevention of GERD. The skilled artisan would not reasonably expect that the claimed pharmaceutical combination composition could be used to prevent GERD.

There are no working examples drawn to a prevention modality in which the claimed pharmaceutical combination composition comprising both an acid labile proton pump inhibitor (a) and a buffering agent (b) is shown to be clinically effective for prevention of GERD.

The term "prevention" is an absolute definition that means to stop from occurring and thus requires a higher standard for enablement than does "therapeutic" or "treat". It

is well established in the medical arts that the vast majority of diseases suffered by mankind cannot be totally prevented with current therapies.

The quantity of experimentation necessary

Applicants have failed to provide guidance as to the efficacy of any other acid labile proton pump inhibitor, other than omeprazole, or any other buffering agent, other than sodium bicarbonate. The skilled artisan would expect the interaction of particular compounds in the prevention of GERD to be very specific and highly unpredictable absent a clear understanding of the structural and biochemical basis for the combination of agents. The instant specification sets forth no such understanding. No direction is provided to distinguish therapy among the various compounds that are encompassed in parts (a) and (b) of Claims 1 or 34. Absent reasonable *a priori* expectations of success for using a particular pair of an acid labile proton pump inhibitor and a buffering agent, one skilled in the art would have to test extensively many combinations to discover which combination in particular exhibits an effect in treating or preventing GERD. Since each prospective embodiment, as well as future embodiments as the art progresses, would have to be empirically tested, undue experimentation would be required to practice the invention as it is claimed in its current scope. The Specification provides inadequate guidance to do otherwise.

Prevention entails the complete and absolute inhibition of the onset of GERD and any manifestation of the disease entirely. Due to the known unpredictability of the art, and in the absence of experimental evidence commensurate in scope with the claims, the skilled artisan would not accept the assertion that GERD could be prevented

following the administration of any combination of an acid labile proton pump inhibitor with any buffering agent. Accordingly, the instant claims do not comply with the enablement requirements of 35 U.S.C. 112, first paragraph, since to practice the claimed invention would require a person of ordinary skill in the art to engage in undue experimentation with no assurance of success.

14. Claim 52 is rejected under 35 U.S.C. 112, first paragraph, as lacking a clear written description of the invention and of the manner and process of practicing it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which is most nearly connected, to practice same, and, as not setting forth the best mode contemplated by the inventor to carry out the invention.

Claim 52 is directed to a method of treating a subject having or "at risk of having" a gastric acid related disorder. The Specification provides support for those patients having a gastric acid related disorder. However, one skilled in the art finds no guidance with respect to identifying or treating patients at risk of having a gastric acid related disorder. Accordingly, Claim 52 does not find support in the Specification in the form of a definitive treatment for this potential patient population. There is no showing that Applicants had possession of the claimed invention in this regard. The present level of skill in the gastroenterology art for treating gastric acid related disorders is such that one would reasonably require a more detailed written description directed to the means of carrying out the claimed methods involving risk for developing the disorders.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

16. Claims 1-17, 20-28, 30, 32-35, and 52-69 are rejected under 35 U.S.C. 102(a) as being anticipated by Phillips (U.S. Patent No. 6,489,346 B1).

Phillips teaches a pharmaceutical composition comprising a non-enteric coated proton pump inhibitor, in an amount of approximately 5 mg to approximately 300 mg, and a least one buffering agent, in an amount of approximately 0.1 mEq to approximately 2.5 mEq per mg of proton pump inhibitor. See Abstract. Phillips teaches the composition can be formulated as a powder, tablet, suspension tablet, chewable tablet, capsule, effervescent powder, effervescent tablet, pellets and graduals and liquids. The buffering agent is utilized to protect the proton pump inhibitor against gastric acid degradation. See column 11 lines 13-32. Phillips teaches omeprazole/sodium bicarbonate formulations wherein omeprazole is present in the formulation in the amount of 5 mg, 10 mg, 20 mg, 40 mg, 60 mg, 80 mg and 100 mg. See column 39, claim 1 and column 41, claims 36-41. The reference further teaches the formulation buffering agent (i.e., sodium bicarbonate) is present in the amount of 400 mg to 4000 mg. See column 42, claim 59. The proton pump inhibitor can be an enantiomer, isomer, derivative, free base or salt of the parent compound. See column 42, claim 57. Phillips teaches the proton pump inhibitor can be micronized. See

column 41, claim 49. The composition taught further comprises excipients, including flavoring agents, diluents, disintegrants, lubricants, preservatives and lubricants. See column 44, claim 116. Furthermore, Phillips teaches methods of treating gastrointestinal conditions, including GERD, by administration of the proton pump inhibitor/buffer formulations described above (including omeprazole/sodium bicarbonate). See column 12, lines 39-49.

It is noted that *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter, which there is reason to believe inherently includes functions that are newly cited, or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter to be shown in the prior art does not possess the characteristic relied on" (205 USPQ 594, second column, first full paragraph). Phillips teaches proton pump inhibitor/buffering agent compositions that are identical to those recited by the instant invention (*supra*). Therefore, the pharmacokinetic and pharmacodynamic characteristics of the compositions taught by Phillips would be the same as those recited by the instant claims. To distinguish their claims from that which is taught by Phillips, the Applicants must show that the teachings of Phillips do not anticipate instant Claims 1-17, 20-28, 30, 32-35, and 52-69. There is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention, but only that the subject matter is in fact inherent in the prior art reference. *Schering Corp. v. Geneva Pharm. Inc.*, 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003); see also *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1320,

69 USPQ2d 1584, 1590 (Fed. Cir. 2004) ("[T]he fact that a characteristic is a necessary feature or result of a prior-art embodiment (that is itself sufficiently described and enabled) is enough for inherent anticipation, even if that fact was unknown at the time of the prior invention").

17. Claims 1-17, 20- 35, and 52-69 are rejected under 35 U.S.C. 102(a) as being anticipated by Phillips (U.S. Patent Application Pub. No. 2003/0191159 A1).

Phillips teaches methods and compositions for treating gastric acid disorders, including *inter alia* GERD and heartburn, employing pharmaceutical compositions comprising an acid labile proton pump inhibitor and a buffering agent. See Abstract, and page 11, paragraph 100, and page 54, claim 122. Phillips teaches the composition can be formulated as a powder, tablet, suspension tablet, chewable tablet, capsule, effervescent powder, effervescent tablet, pellets and graduals and liquids. The buffering agent is utilized to protect the proton pump inhibitor against gastric acid degradation. See page 5, paragraph 37 and page 52, claim 37. Phillips teaches the proton pump inhibitors are present in the composition in amounts from 5 mg to 1000 mg and unit doses of 5 mg, 10 mg, 15 mg, 20 mg, 25 mg, 30 mg, 40 mg, 50 mg, 60 mg, 75 mg, 80 mg, or 100 mg. See page 10, paragraphs 84 and 85. The reference teaches the buffering agent present in the composition in an amount of 0.1 mEq to 2.5 mEq per mg of proton pump inhibiting agent. The reference further teaches the formulation buffering agent (i.e., sodium bicarbonate) is present in the amount of 250 mg to 4000 mg. See page 52, claim 26. The proton pump inhibitor can be in the form of a salt, ester, amide, enantiomer, isomer, tautomer, prodrug, derivative. See page 7,

paragraph 65. Phillips teaches the proton pump inhibitor can be micronized. See page 13, paragraph 131. The composition further comprises excipients, including flavoring agents, diluents, disintegrants, lubricants, preservatives and lubricants. See page 53, claim 70. The reference teaches the proton pump inhibitor can be enteric coated or uncoated. See page 5, paragraphs 37 and 38, and page 52, claim 45. The Phillips reference teaches that the composition buffering agent is present in an amount sufficient to increase gastric fluid pH of the stomach to a pH that inhibits acid degradation of the proton pump inhibitor agent in the gastric fluid, so as to allow absorption of the proton pump inhibiting agent and to provide a therapeutically effective serum concentration of the proton pump inhibitor of at least 150 ng/ml within 15 minutes after ingestion of the composition. See page 52, claim 37. Phillips teaches an omeprazole T_{max} of less than 1.5 hours with a C_{max} ranging from 763 ng/ml to 1460 ng/ml for an omeprazole/sodium bicarbonate composition. See page 30, paragraph 325 and Table 9. Phillips further teaches a plethora of additional pharmacokinetic and pharmacodynamic information on proton pump inhibitor/buffering agent compositions. One of skill in the art would recognize that the pharmacokinetic and pharmacodynamic characteristics of a composition are complex and depend upon *inter alia* the age, body weight, general health, and sex of the patient, the rate of excretion, the drug combination and formulation, and the route of administration.

As discussed in the presentation of the previous reference (*supra*), *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter, which there is reason to believe

inherently includes functions that are newly cited, or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter to be shown in the prior art does not possess the characteristic relied on" (205 USPQ 594, second column, first full paragraph). Phillips teaches proton pump inhibitor/buffering agent compositions and methods that are identical to those recited by the instant invention (*supra*). Therefore, the pharmacokinetic and pharmacodynamic characteristics of the compositions taught by Phillips would be the same as those recited by the instant claims. To distinguish their claims from that which is taught by Phillips, the Applicants must show that the teachings of Phillips do not anticipate the instant invention.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. Claims 1-17, 20- 35, and 52-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (U.S. Patent No. 6,489,346 B1). Claims 1-17, 20- 35, and 52-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (U.S. Patent Application Pub. No. 2003/0191159 A1)

The teachings of both Phillips references are presented *supra*.

In view of the teachings of both Phillips references, taken individually, one skilled in the art of pharmaceutical formulation is provided with guidelines sufficient to prepare formulations comprising a proton pump inhibitor, such as omeprazole, in combination with a buffer, such as sodium bicarbonate, to treat patients suffering from GERD. Each reference teaches or suggests each limitation of the present claims. It is not inventive to discover the optimum or workable ranges by routine experimentation when general conditions of a claim are disclosed in the prior art. See In re Aller, 220 F.2d 454, 456, 105 USPQ233,235 (CCPA 1955) and MPEP 2144.05(11). The determination of the optimum dosages, particle sizes, gastric fluid pH ranges, serum concentrations over time and drug release rates to employ or to seek with the presently claimed agents, would have been a matter well within the purview of one of ordinary skill in the art. Such determination would have been made in accordance with a variety of factors. These would have included such factors as the age, weight, sex, diet and medical condition of the patient, severity of the disease, the route of administration, pharmacological considerations, such as the activity, efficacy, pharmacokinetics and toxicology profiles

of the particular compound employed, whether a drug delivery system is utilized and whether the compound is administered as part of a drug combination. Thus, in the absence of evidence to the contrary, the currently claimed specific dosage amounts, particle sizes, serum concentrations over time and drug release rates are not seen to be inconsistent with those that would have been determined by the skilled artisan.

Double Patenting

21. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 1-17, 20- 35, and 52-69 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-11, 13-39, 41, 44, 45 and 47-63 of copending Application No. 10/938766; Claims 44-85 of copending Application No. 10/893092; Claims 1-35 of copending Application No.

11/107349; Claims 1-15, 17, 18, 20-25, 54, 56-86 of copending Application No. 10/893203; Claims 48-58 of copending Application No. 11/138763; and Claims 1-55 of copending Application No. 10/982369 . Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending applications are drawn to compositions and methods of treating GERD or gastric acid-related disorders comprising administering at least one substituted bicyclic aryl-imidazole acid labile proton pump inhibitor and at least one buffering agent, and pharmaceutical compositions thereof. The claims in the '349 application additionally require at least one 5-HT inhibitor. The claims in the '092 application additionally require at least one flavoring agent. The claims in the '763 application additionally require at least one disintegrant. The claims in the '369 application require at least one antihistamine sleep aid. However, the addition of any number of active (or inactive) components is permitted, in view of the open language of the present claims.

These are provisional obviousness-type double patenting rejections because the conflicting claims have not in fact been patented.

Conclusion

23. Claims 1-17, 20- 35, and 52-69 are rejected.

24. No claims are allowed.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Polansky whose telephone number is (571) 272-9070. The examiner can normally be reached on Mon-Thur 8:30 A.M. - 7:00 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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